

## REMARKS

Claims 4, 25, 33, 53 and 80 have been canceled. Claims 1, 5, 22, 26, 30, 34, 50, 54, and 77 have been amended. Claims 1-3, 5-24, 26-32, 34-52, 554-79 remain in the application for consideration. In view of the following remarks amendments and/or remarks, Applicant respectfully requests that the application be forwarded onto issuance.

### §112 Rejections

Claims 20, 21, 48 and 49 stand rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Specifically, the Office states that the difference between a “trust parameter” and a “confidence parameter” is unclear in view of the definition that the Office provides on page 2 of the present Office Action.

Applicant respectfully submits that there is nothing indefinite or unclear with the use of these terms in the claims, when the claims are viewed in light of the specification.

Specifically, consider first the recited “confidence parameter”. Beginning on page 39 of the specification under the heading “Confidence and Accuracy Parameters” is a discussion of the “confidence parameter”. Specifically, starting at line 16, the specification instructs as follows:

*Confidence parameters provide a measure of a provider's confidence in the information that it provides to the location service module 602.* For example, assume that a GPS transmitter must receive information from five or more satellites in order to provide highly confident information. Assume that only three satellites are available at the time. The GPS transmitter would then transmit its information based only on the three satellites. The GPS provider would then know that the information it receives from the GPS transmitter was based only on three satellites rather than the desired five or more. In this case, the GPS provider can set a

1 confidence parameter on the location information that indicates that it has a  
2 lower confidence level than if the information were based on the desired  
3 five or more satellites. In this case, the location service module 602 can  
4 take the confidence parameters for all of the location providers into account  
5 when determining the location of the device.

6 With respect to the recited “trust parameter”, the specification instructs,  
7 beginning on page 41, line 7 as follows:

8 When the location providers provide their information to the location  
9 service module 602, the information can include, in addition to the  
10 confidence and accuracy parameters, the actual location information in a  
11 known format, a trust parameter and a timestamp. ***The trust parameter is a  
12 metric that is assigned by the location service module 602 to one or more  
13 of the location providers and defines the trust that the location service  
14 module has for the particular location provider.*** The timestamp is a metric  
15 that defines the time when the location information was provided by the  
16 location provider. This assists the location service module 602 in  
17 ascertaining whether information is stale and might need refreshed.

18 Thus, in view of the discussion of confidence and trust parameters in the  
19 specification, Applicant respectfully submits that there is nothing indefinite with  
20 regards to these terms. Specifically, a confidence parameter provides a measure of  
21 a ***provider’s confidence*** in the information that it provides to the location service  
22 module, while a trust parameter is a metric that is assigned to one or more of the  
23 location providers and defines the ***trust that the location service module has for  
24 the particular location provider.***

25 Accordingly, Applicant respectfully traverses the Office rejections of these  
claims.

1                   **§§ 102 and 103 Rejections**

2                   Claims 1, 2, 9, 10, 22, 23, 30, 31, 38, 39, 50, 51, 58, 64, 77, and 78 stand  
3 rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No.  
4 6,401,051 to Merriam.

5                   Claims 3-8, 11-12, 14, 15, 24-29, 32-37, 40, 42, 43, 52-57, 59-63, 65-70,  
6 74-76 and 79 stand rejected under 35 U.S.C. §103(a) as being obvious over  
7 Merriam in view of U.S. Patent No. 5,539,922 to Wang.

8                   Claims 13, 16-19 and 44-47 stand rejected under 35 U.S.C. §103(a) as  
9 being obvious over Merriam in view of U.S. Patent No. 6,301,584 to Ranger.

10                  Claims 71-73 stand rejected under 35 U.S.C. §103(a) as being obvious over  
11 Merriam in view of Wang and Ranger.

12                  Before undertaking a discussion of the substance of the Office's rejections,  
13 the following discussion of the §103 Standard, as well as the references to  
14 Merriam and Wang is provided.

15  
16                   **The § 103 Standard**

17                  To support the conclusion that the claimed invention is directed to obvious  
18 subject matter, either the references must expressly or impliedly suggest the  
19 claimed invention or the examiner must present a convincing line of reasoning as  
20 to why the artisan would have found the claimed invention to have been obvious  
21 in light of the teachings of the references. See, e.g. *Ex parte Clapp*, 227 USPQ  
22 972, 973 (Bd. Pat. App. & Inter. 1985). Particular findings must be made as to the  
23 *reason* the skilled artisan, *with no knowledge of the claimed invention*, would have  
24 selected these components for combination in the manner claimed. *In re Kotzab*,  
25 217 F.3d 1365, 1371, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000).

1 Applicant respectfully submits that the Office has not made *particular*  
2 *findings* as to the reason the claimed subject matter would be obvious in view of  
3 the cited references. The Office makes many statements in arguing its §103  
4 combination that simply do not rise to the level of establishing a *prima facie* case  
5 of obviousness.

6 For example, in making out the rejection of claim 3, the Office argues as  
7 motivation that a person of skill “would have readily recognized the desirability  
8 and the advantage of implementing the system of Merriam as a handheld device in  
9 order to minimize the size and weight of said device to facilitate transportation.”

10 Additionally, in making out the rejection of claim 11, the Office argues as a  
11 motivation that a person of skill in the art “would have readily recognized the  
12 desirability and the advantage of configuring said device to receive events that  
13 pertain to the status of the context providers, as the context providers are necessary  
14 for the operation of said device.”

15 Further, in making out the rejection of claim 4, the Office argues as a  
16 motivation that a person of skill would make the argued modification “to provide a  
17 method of mapping the context information to a node on a hierarchical tree  
18 structure and for the advantage of efficiently tracking a device location in a  
19 hierarchical system.” Hence, the Office essentially argues that its combination  
20 would be motivated for the purpose of making a more efficient system.

21 Applicant respectfully disagrees and submits that the Office has not  
22 established a *prima facie* case of obviousness, as will be discussed below.

23 Additionally, and as an aside, the Office has provided a paper, available at  
24 the following link:

25 <http://www.uspto.gov/web/menu/busmethp/busmeth103rej.htm>

1  
2 that describes proper and improper rejections made under §103(a).  
3 Particularly instructive are Examples 17 and 18 that appear in Section V of the  
4 paper illustrating improper §103(a) rejections which are based, respectively, upon  
5 hindsight in view of a general motivation statement and a proposed motivation that  
6 is contrary to the stated purpose of the reference. These examples are reproduced  
7 below in their entireties for the Office's convenience:

8 **V. Examples of Improper Rejection under 35 U.S.C. 103**

9 Example 17: Improper rejection based upon hindsight - general  
10 motivation statement.

11  
12 **a. The claimed invention**

13 The invention is drawn to a smart card containing a tracking  
14 mechanism, which tracks shopping preferences of consumers by recording  
15 the type, quantity, and dates of purchase for a pre-selected group of  
16 products. The smart card is useful in a system and method for introducing  
17 new and alternative products that are of the same type as products normally  
18 purchased by the shopper. The smart card records the shopper's purchases  
19 and submits an automatic notification to the shopper when a quantity  
20 threshold is achieved for the pre-selected products. This notification will  
21 encourage the consumer to consider alternative products by providing the  
22 consumer incentives, such as a pricing discount, to purchase an alternative  
23 product.

24 **Claim 1:**

25 A method for using a smart card in a marketing analysis program designed  
to introduce new products, the method comprising the steps of:

storing product information on the smart card when said products  
are purchased by a consumer wherein said information including type,  
quantity and dates of the product purchased;

1 identifying for each product a threshold for each of said type,  
2 quantity and dates of products purchased;

3 determining an incentive for an alternative product based on said  
4 threshold; and

5 automatically notifying said consumer when said threshold is  
6 reached for a given product identified on the smart card and providing the  
7 consumer with said incentive, whereby the incentive encourages the  
8 consumer to consider alternative products.

#### 9 **b. Evidence**

10 Reference A discloses smart card that tracks consumer preferences by  
11 recording the type, quantity, and dates of purchase of pre-selected products to  
12 determine trends in consumer purchases. The smart card is periodically read by a  
13 scanner to determine its contents for market analysis. In return for using the smart  
14 card and participating in the marketing program, the user is provided with free  
15 product coupons for products that are normally purchased by the shopper.

16 Reference B discloses a traditional consumer incentive program that  
17 provides coupons for the purchase of named products based upon the consumer's  
18 purchase of those same products to promote customer loyalty.

#### 19 **c. Poor statement of the rejection**

20 Claim 1 is rejected under 35 U.S.C. 103 as being unpatentable over  
21 Reference A in view of Reference B. Reference A discloses the  
22 conventional use of a smart card to track consumer preferences and provide  
23 incentives. However, Reference A does not disclose the automatic  
24 notification to consumer providing incentives. Reference B discloses  
25 providing incentives to consumers to purchase the desired products. *It  
would have been obvious to combine Reference A's smart card with  
Reference B's incentive to consumers because the combination would  
allow Reference A's smart card to be more efficient.*

#### **d. Analysis**

*The motivation, improve efficiency, is too general because it could cover  
almost any alteration contemplated of Reference A and does not address why  
this specific proposed modification would have been obvious. Additionally,  
there is nothing in either of references that would suggest automatically notifying  
the consumer when reaching a threshold nor is there anything in either reference  
that would suggest the notifying step. Finally, although Reference B teaches a  
traditional coupon scheme to promote customer loyalty, there is no suggestion,*

1 other than applicant's disclosure, to employ this scheme to promote the  
2 introduction of new and alternative products. **The rejection is improper.**

3 Example 18: Improper rejection based upon hindsight - proposed  
4 motivation contrary to the stated purpose of the reference.

5 **a. The claimed invention**

6 The claim recites a smart card containing a tracking mechanism which  
7 tracks shopping preferences of consumers including the type and quantity  
8 of products purchased as well as the time interval over which the purchases  
9 are made by the consumer. Additionally, after a predefined start-up period,  
10 an automatic notification to the consumer is provided when a particular  
11 product would normally be purchased by the consumer. This notification  
12 will encourage the consumer to consider same product by providing the  
13 consumer incentives to purchase the product, including substantial price  
14 reductions which vary on a periodic basis, thereby increasing sales and  
15 product loyalty.

16 **Claim 1:**

17 A method for using a smart card in a marketing analysis program, the  
18 method comprising the steps of:

19 storing a product information on the smart card when said products  
20 are purchased by a consumer wherein said information including type,  
21 quantity and dates of the product purchased;

22 identifying a threshold for each of said type, quantity and dates  
23 of products purchased;

24 determining an incentive for each purchased product based on said  
25 threshold; and

automatically notifying said consumer when said threshold is  
reached for the same type of product identified on the smart card and  
providing the consumer with said incentive, whereby the incentive  
encourages the consumer to purchase the same product to increase sales  
and product loyalty.

**b. Evidence**

Reference A discloses smart card that tracks consumer preferences by  
recording the type, quantity, and dates of purchase of pre-selected products to

1 determine trends in consumer purchases and the potential for offering new  
2 products to certain shoppers. The smart card is periodically read by a scanner to  
3 determine its contents for market analysis. In return for using the smart card and  
4 participating in the marketing program, the user is provided with free product  
5 coupons for new and alternative products that are of the same type as the products  
6 normally purchased by the shopper.

7 Reference B discloses a traditional consumer incentive program that  
8 provides coupons for the purchase of named products based upon the consumer's  
9 purchase of those same products to promote customer loyalty.

#### 10 c. Poor statement of the rejection

11 Claim 1 is rejected under 35 U.S.C. 103 as being unpatentable over  
12 Reference A in view of Reference B. Reference A discloses the use of a smart  
13 card to track consumer preferences and determine what new products might be of  
14 interest to the consumer. However, Reference A does not disclose the automatic  
15 notification to consumer providing incentives. Reference B discloses providing  
16 incentives, such as coupons, to consumers to purchase the desired products. It  
17 would have been obvious to combine Reference A's smart card with Reference  
18 B's incentive to consumers because the combination would allow Reference A's  
19 smart card to increase sales of the desired product.

#### 20 d. Analysis

21 The motivation is not sound because *there is nothing in either of*  
22 *references that would suggest that the motivation for combining the references*  
23 *is known outside of applicant's disclosure.* Additionally, there is nothing in the  
24 references that would suggest incorporating the claimed notifying step with the  
25 smart card. Further, the proposed modification would destroy the intended  
purpose of Reference A; providing a program to introduce new and alternative  
products. **The rejection is improper.**

19 In the first example, the rejection attempted to at least provide a reason for  
20 combining the references—even though that reason was too general, and did not  
21 address *why* a specific proposed modification would have been obvious. As noted  
22 in the critique of Example 17, “[t]he motivation, improve efficiency, is too general  
23 because it could cover almost any alteration contemplated of Reference A and  
24 does not address why this specific proposed modification would have been  
25



1 obvious.” Additionally, as noted in the critique of Example 18, “[t]he motivation  
2 is not sound because there is nothing in either of the references that would suggest  
3 that the motivation for combining the references is known outside of applicant’s  
4 disclosure.”

5 The same can be said of the Office’s attempted combination of Merriam  
6 and Wang. This is even more so the case when one delves into the specifics of  
7 each of the references. Accordingly, below are two sections—one entitled “The  
8 Merriam Reference” and one entitled “The Wang Reference”, each of which  
9 discusses their respective reference.

#### 10 11 **The Merriam Reference**

12 Merriam discloses a method and apparatus for locating buried objects, such  
13 as such as underground cables, prior to digging at a particular location. Merriam  
14 instructs that a positioning device is taken to the location where digging is to take  
15 place and receives positioning signals from one or more positioning stations.  
16 Based upon the positioning signals, the positioning device determines its current  
17 location and hence the location of the dig site. Once the current location is  
18 determined, a registry database containing the locations of previously buried  
19 objects is accessed. The registry database is queried for all locations within a  
20 selected distance of the current location which have buried objects. If this query  
21 returns no records, then Merriam instructs that it is probably safe to dig at the  
22 current location. On the other hand, if the query returns one or more locations,  
23 then Merriam instructs that further digging at the current location should either be  
24 avoided or performed with great caution.  
25

Merriam's Fig. 1 provides an illustration of its system, generally at 100. There, system 100 comprises one or more positioning devices 102, a central computer 104, and one or more positioning stations 106. Merriam instructs that the positioning device 102 is the component that is taken to a dig site and that its responsibility is to determine its own current location, and hence the current location of the dig site. This determination is made based upon positioning signals provided to the positioning device 102 by the positioning stations 106. Once the current location is determined, the central computer 104 is consulted, via a communications link 108, to determine whether there are any buried objects at or near the current location. The central computer 104, which maintains a registry database 110 of locations at which objects have been previously buried, makes this determination by searching the database 110 for all locations within a certain distance of the current location. Thereafter, the central computer 104 provides to the positioning device 102, via the communications link 108, all of the locations retrieved from the database 110. Based upon the location information received from the central computer 104, the positioning device 102 provides to a user an indication as to whether there are buried objects within relative close proximity to the current location. This indication allows the user to determine whether he should or should not dig at the current location.

### **The Wang Reference**

Wang discloses communication systems for portable transceivers and methods and systems that trace the locations of portable transceivers.

Perhaps a good place to start a discussion of Wang is with its Fig. 1. There, Wang shows a hierarchical structure for a communication system 100. Wang

1 instructs that covered area of the communication system 100 is organized into a  
2 hierarchical structure having several layers. The highest layer may be the earth  
3 102 followed by country 104, state 106, area code 108, city 110, and the lowest  
4 layer (Layer 1) is a primary layer that comprises a plurality of independent paging  
5 regions (cells) 112. According to Wang, each region defines an area or location in  
6 which one may be paged. Each layer 1 cell comprises one or more base stations.  
7 Layer 1 may comprise a radio telephone communication system (e.g., Digital  
8 European Cordless Telephone).

9 As Wang instructs, each block in layers 2 through 6 (the secondary layers)  
10 is a communication service node representing a *switching station having*  
11 *computing and memory means* (i.e., all layers >1 are intelligent layers). The  
12 memory means (at each of the switching stations) comprises a database for  
13 tracking the location of customers (i.e., users of portable communication units that  
14 are registered in the system). Thus, what begins to emerge from a preliminary  
15 overview of Wang is a system in which transceivers are tracked by a number of  
16 geographically-separated switching stations, each with computing and memory  
17 means which includes a database to track customer locations.

18 The operation of Wang's system is probably best appreciated from its Fig.  
19 5. There, Wang shows a diagram illustrating an example of how a customer or  
20 transceiver is traced via an address chain. In this example, an entity known as a  
21 "called party" (unit 24) has a home address in cell 1,d, and a current address at cell  
22 8,d. In a first case, the communication unit 20, located in cell 2,c, places a call to  
23 communication unit 24. To do this, Wang instructs that the communication unit  
24 20 dials the home address number of the called party. The calling party's  
25 connection request is received by a base station at cell 2,c, and it is passed on to

1 the Boynton node in layer 2. That is, the connection request is passed on to a  
2 different switching station with its own computing and memory means, as noted  
3 above.

4 At the Boynton node, the corresponding database is searched for an entry  
5 pertaining to the called party. In this case an entry is found in the database. The  
6 entry contains the home address (HA) of the called party and an "OUT" indication  
7 which indicates that the transceiver is outside of the covered region associated  
8 with the Boynton node. This being the case, the call is then forwarded along the  
9 address chain to the "407" node of layer 3, where the corresponding database also  
10 contains the home address of the called party and an "OUT" indication which  
11 indicates that the transceiver is outside of the covered region associated with the  
12 "407" node. Thus, the connection request is further traced up through the Florida  
13 node of layer 4, also indicating that the called party is "OUT". Then, in the U.S.A.  
14 node of layer 5, with its associated computing and memory means (i.e. database),  
15 indicates that the portable device 24 is in Georgia. The tracing then continues to  
16 the Georgia node, where the area code "404" is indicated. Thereafter, the tracing  
17 process continues to the "404" node, where "Atlanta" is indicated. Searching in  
18 the Atlanta database reveals the location of the portable communication unit 24,  
19 and the requested connection is made.

20 With respect to updating and maintaining all of the databases, Wang  
21 instructs as follows. The database updating process is initiated by the portable  
22 communication units. Each base station continuously transmits its subsystem  
23 identification information. By monitoring this information from the surrounding  
24 bases, an active portable communication unit is able to select a desired base station  
25 (e.g., the strongest base) and lock on to it. Whenever a new strongest base station

1 is found, up to two messages may be transmitted to the associated bases to update  
2 the address chains. The address of the base to which the portable communication  
3 unit is locking is called the current address and the address of the base of the new  
4 strongest base is called the new address.

### 6 **The Office's Attempted Combination of Merriam and Wang**

7 In attempting to combine Merriam and Wang, the Office argues that  
8 Merriam discloses all recited features but is silent as to the specifics of how the  
9 location is determined. The Office then relies on Wang and argues that Wang  
10 discloses a communication system with a hierarchical system of nodes organized  
11 into nodes trees. The Office notes that Wang's hierarchical system is capable of  
12 tracking the location of a transceiver as it moves between nodes of the tree  
13 structure.

14 Given these two references, the Office argues that their combination would  
15 render the subject matter of many of the claims obvious. In support of its  
16 argument, the Office argues that the skilled artisan would have readily recognized  
17 the desirability and advantage of modifying Merriam by employing the system of  
18 Wang in order to provide a method of mapping the context information to a node  
19 on a hierarchical tree structure and for the advantage of *efficiently tracking* a  
20 device location in a hierarchical system.

21 Applicant again respectfully disagrees with the Office's combination and  
22 its stated motivation to combine these references. As such, Applicant respectfully  
23 submits that the Office has failed to establish a *prima facie* case of obviousness.

24 Consider, for example, the nature of Merriam's disclosure. Specifically,  
25 Merriam teaches a system that utilizes a positioning device to receive positioning

1 signals so that the positioning device can determine its location. Once its location  
2 is determined, the positioning device can ascertain whether it is safe to dig at the  
3 particular location. Once this determination is made, the positioning device is  
4 done and its user can conceivably move on to another location. The Office argues  
5 that it would be obvious to employ Wang's hierarchical system in Merriam's  
6 system to efficiently track Merriam's device.

7 Applicant respectfully submits that Merriam's system and method have no  
8 need whatsoever for tracking its positioning device. That is, Merriam's  
9 positioning device determines its current location and whether it is safe to dig at  
10 that current location. When Merriam's positioning device is moved to a next  
11 location, it is of no consequence whatsoever where the positioning device has been  
12 in the past. The only thing that is of any consequence with respect to the next  
13 location, is whether it is safe to dig at that next location. Accordingly, the  
14 motivation to combine these references, i.e. to track Merriam's device, is  
15 misplaced at best.

16 There appears to be no logical or technically meaningful reason for  
17 Merriam's device to be tracked after it performs its function at a particular  
18 location. In addition, there do not appear to be any inefficiencies associated with  
19 Merriam's approach that would be mitigated by incorporating Wang's teachings  
20 therein. Hence, the Office's rationale is misplaced and inappropriate. Applicant  
21 will now address the specific rejections of the claims.

## 22 23 **The Claims**

24 **Claim 1** has been amended and recites [added language appears in bold  
25 italics]:

- determining whether any of a number of context providers are available to provide context information that can be processed by the computing device to ascertain its context;
- receiving context information from one or more of the context providers that are determined to be available; and
- processing the context information on the computing device to determine the context of the computing device, *wherein the processing of the information comprises:*
  - *mapping the context information to a node on a hierarchical tree structure that is carried on the device, the hierarchical tree structure comprising multiple nodes that represent physical or logical entities; and*
  - *traversing one or more nodes of the tree structure to ascertain a complete context.*

In making out the rejection of this claim (which has been amended to include the features of claim 4), the Office argues that Merriam discloses all recited features but is silent as to the specifics of how location is determined. The Office then relies on Wang and argues that Wang discloses a communication system with a hierarchical system of nodes organized into nodes trees. The Office notes that Wang's hierarchical system is capable of tracking the location of a transceiver as it moves between nodes of the tree structure.

Given these two references, the Office argues that their combination would render the subject matter of this claim obvious. In support of its argument, the Office argues that the skilled artisan would have readily recognized the desirability and advantage of modifying Merriam by employing the system of Wang in order to provide a method of linking root nodes of various trees and for the advantage of efficiently tracking a device location in a hierarchical system.

1 Applicant respectfully disagrees with the Office's combination and its  
2 stated motivation to combine these references. As such, Applicant respectfully  
3 submits that the Office has failed to establish a *prima facie* case of obviousness.

4 Consider, for example, the nature of Merriam's disclosure. Specifically,  
5 Merriam teaches a system that utilizes a positioning device to receive positioning  
6 signals so that the positioning device can determine its location. Once its location  
7 is determined, the positioning device can ascertain whether it is safe to dig at the  
8 particular location. Once this determination is made, the positioning device is  
9 done and its user can conceivably move on to another location. The Office argues  
10 that it would be obvious to employ Wang's hierarchical system in Merriam's  
11 system to efficiently track Merriam's device.

12 Applicant respectfully submits that Merriam's system and method have no  
13 need whatsoever for tracking its positioning device. That is, Merriam's  
14 positioning device determines its current location and whether it is safe to dig at  
15 that current location. When Merriam's positioning device is moved to a next  
16 location, it is of no consequence whatsoever where the positioning device has been  
17 in the past. The only thing that is of any consequence with respect to the next  
18 location, is whether it is safe to dig at that next location. Accordingly, the  
19 motivation to combine these references, i.e. to track Merriam's device, is  
20 misplaced at best. As such, the Office has failed to establish a *prima facie* case of  
21 obviousness and this claim is allowable.

22 In addition, the Office's motivation to combine these two references -- for  
23 efficient tracking -- falls far short of a legally appropriate motivation. The  
24 Office's stated motivation is akin to the legally inappropriate motivation that was  
25 provided in the paper that appears on the Office's own web site. Just as the stated



1 motivation in the Office's own example was "too general because it could cover  
2 almost any alteration" of the references, so too is the stated motivation in the  
3 present example.

4 Accordingly, for at least these reasons, the Office has failed to establish a  
5 *prima facie* case of obviousness and this claim is allowable.

6 **Claims 2, 3 and 5-21** depend from claim 1 and are allowable as depending  
7 from an allowable base claim. These claims are also allowable for their own  
8 recited features which, in combination with those recited in claim 1, are neither  
9 disclosed nor suggested in the references of record, either singly or in combination  
10 with one another. In addition, given the allowability of these claims, the rejection  
11 of claims 13 and 16-19 over the further combination with Ranger is not seen to  
12 add anything of significance.

13 **Claim 22** has been amended and recites one or more computer-readable  
14 media having computer-readable instructions thereon which, when executed by a  
15 computing device, cause the computing device to [added language appears in bold  
16 italics]:

- 17
- 18 • determine whether any of a number of context providers are
- 19 available to provide context information that can be processed by the
- 20 computing device to ascertain its context;
- 21 • receive context information from one or more of the context
- 22 providers that are determined to be available; and
- 23 • process the context information on the computing device to
- 24 determine the context of the computing device *by:*
- 25
  - *mapping the context information to a node on a*
  - hierarchical tree structure that is carried on the device, the*
  - hierarchical tree structure comprising multiple nodes that*
  - represent physical or logical entities; and*
  - *traversing one or more nodes of the tree structure to*
  - ascertain a complete context.*

1  
2 In making out the rejection of this claim (which has been amended to  
3 include the features recited in claim 25), the Office uses the same argument and  
4 reasoning as it did in making out the rejection of claim 4 over Merriam and Wang.  
5 As noted and for all of the reasons above, the Office has failed to establish a *prima*  
6 *facie* case of obviousness. As such, this claim is allowable.

7 **Claims 23, 24 and 26-29** depend from claim 22 and are allowable as  
8 depending from an allowable base claim. These claims are also allowable for their  
9 own recited features which, in combination with those recited in claim 22, are  
10 neither disclosed nor suggested in the references of record, either singly or in  
11 combination with one another.

12 **Claim 30** has been amended and recites a method of determining the  
13 location of a computing device comprising [added language appears in bold  
14 italics]:

- 15
- 16 • determining whether any of a number of location providers are  
17 available to provide location information that can be processed by  
18 the computing device to ascertain its location;
- 19 • receiving location information from one or more of the location  
20 providers that are determined to be available; and
- 21 • processing the location information on the computing device to  
22 determine the location of the computing device, *wherein the*  
23 *processing of the information comprises:*
  - 24 ○ *mapping the location information to a node on a*  
25 *hierarchical tree structure that is carried on the device, the*  
*hierarchical tree structure comprising multiple nodes that*  
*represent physical or logical entities; and*
  - *traversing one or more nodes of the tree structure to*  
*ascertain a complete location.*

1 In making out the rejection of this claim (which has been amended to  
2 include the features recited in claim 33), the Office uses the same argument and  
3 reasoning as it did in making out the rejection of claims 4 and 25 over Merriam  
4 and Wang. As noted and for all of the reasons above, the Office has failed to  
5 establish a *prima facie* case of obviousness. As such, this claim is allowable.

6 **Claims 31, 32, and 34-49** depend from claim 30 and are allowable as  
7 depending from an allowable base claim. These claims are also allowable for their  
8 own recited features which, in combination with those recited in claim 30, are  
9 neither disclosed nor suggested in the references of record, either singly or in  
10 combination with one another. In addition, given the Office's failure to establish a  
11 *prima facie* case of obviousness with respect to the combination of Merriam and  
12 Wang, the rejections of claims 44-47 are not seen to add anything of significance.

13 **Claim 50** has been amended and recites one or more computer-readable  
14 media having computer-readable instructions thereon which, when executed by a  
15 computing device, cause the computing device to [added language appears in bold  
16 italics]:

- 17 • determine whether any of a number of location providers are
- 18 available to provide location information that can be processed by
- 19 the computing device to ascertain its location;
- 20 • receive location information from one or more of the location
- 21 providers that are determined to be available; and
- 22 • process the location information on the computing device to
- 23 determine the location of the computing device *by:*
  - 24 ○ *mapping the context information to a node on a*
  - 25 *hierarchical tree structure that is carried on the device, the*
  - hierarchical tree structure comprising multiple nodes that*
  - represent physical or logical entities; and*
  - *traversing one or more nodes of the tree structure to*
  - ascertain a complete context.*

1  
2 In making out the rejection of this claim (which has been amended to  
3 include the features recited in claim 53), the Office uses the same argument and  
4 reasoning as it did in making out the rejection of claims 4, 25, and 33 over  
5 Merriam and Wang. As noted and for all of the reasons above, the Office has  
6 failed to establish a *prima facie* case of obviousness. As such, this claim is  
7 allowable.

8 **Claims 51, 52, and 54-69** depend from claim 50 and are allowable as  
9 depending from an allowable base claim. These claims are also allowable for their  
10 own recited features which, in combination with those recited in claim 50, are  
11 neither disclosed nor suggested in the references of record, either singly or in  
12 combination with one another.

13 **Claim 70** recites a method of determining a current context of a computing  
14 device comprising:

- 15  
16 • determining a current context of the device by:
  - 17 ○ receiving context information from multiple different context
  - 18 providers;
  - 19 ○ mapping the context information to a node of a hierarchical
  - 20 tree structure that is carried by the device and having multiple
  - 21 nodes each of which represent a physical or logical entity;
  - 22 and
  - 23 ○ traversing the hierarchical tree structure to ascertain a
  - 24 complete device context;
- 25 • receiving additional context information from one or more context providers; and
- updating the current context of the device by:
  - mapping the context information to a node of the hierarchical
  - tree structure that is carried by the device; and
  - traversing the hierarchical tree structure to ascertain a
  - complete device context.

1  
2 In making out the rejection of this claim, the Office uses the same argument  
3 and reasoning as it did in making out the rejection of claims 4, 25, 33 and 53 over  
4 Merriam and Wang. As noted and for all of the reasons above, the Office has  
5 failed to establish a *prima facie* case of obviousness. As such, this claim is  
6 allowable.

7 **Claims 71-76** depend from claim 70 and are allowable as depending from  
8 an allowable base claim. These claims are also allowable for their own recited  
9 features which, in combination with those recited in claim 70, are neither disclosed  
10 nor suggested in the references of record, either singly or in combination with one  
11 another. In addition, given the Office's failure to establish a *prima facie* case of  
12 obviousness with regards to the combination of Merriam and Wang, the rejections  
13 of claims 71-73 over the further combination with Ranger are not seen to add  
14 anything of significance.

15 **Claim 77** has been amended and recites a computing device comprising  
16 [added language appears in bold italics]:

- 17
- 18 • a computer-readable medium; and
  - 19 • a context service module on the computer-readable medium and  
20 configured to process information from multiple different context  
21 providers to determine a current device context, the context service  
22 module being configured to:
    - 23 ○ determine whether any of a number of context providers are  
24 available to provide context information that can be processed  
25 by the computing device to ascertain its context;
  - receive context information from one or more of the context  
providers that are determined by the device to be available; and
  - process the context information on the computing device to  
determine the context of the computing device *by:*
    - *mapping the context information to a node on a  
hierarchical tree structure that is carried on the device, the*

*hierarchical tree structure comprising multiple nodes that represent physical or logical entities; and*

- *traversing one or more nodes of the tree structure to ascertain a complete context.*

In making out the rejection of this claim (which has been amended to include the features recited in claim 80), the Office uses the same argument and reasoning as it did in making out the rejection of claims 4, 25, 33 and 53 over Merriam and Wang. As noted and for all of the reasons above, the Office has failed to establish a *prima facie* case of obviousness. As such, this claim is allowable.

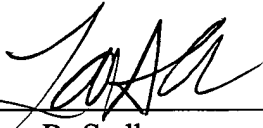
**Claims 78 and 79** depend from claim 77 and are allowable as depending from an allowable base claim. These claims are also allowable for their own recited features which, in combination with those recited in claim 77, are neither disclosed nor suggested in the references of record, either singly or in combination with one another.

1                    **Conclusion**

2                    All of the claims are in condition for allowance. Accordingly, Applicant  
3 requests a Notice of Allowability be issued forthwith. If the Office's next  
4 anticipated action is to be anything other than issuance of a Notice of Allowability,  
5 Applicant respectfully requests a telephone call for the purpose of scheduling an  
6 interview.

7                    Respectfully Submitted,

8  
9                    Dated: 12/22/09

10                    By:   
11                    Lance R. Sadler  
12                    Reg. No. 38,605  
13                    (509) 324-9256